

Contents Volume 109, 1993

Letter Section

The application of laser ablation microprobe-inductively coupled plasma-mass spectrometry (LAM-ICP-MS) to *in situ* (U)-Pb geochronology
B.J. Fryer, S.E. Jackson and H.P. Longerich 1

Research Papers

An experimental study of krypton diffusion and solubility in silicic glasses
M.R. Carroll, S.R. Sutton, M.L. Rivers and D.S. Woolum 9

Proton microprobe determined partitioning of Rb, Sr, Ba, Y, Zr, Nb and Ta between experimentally produced amphiboles and silicate melts with variable F content
J. Adam, T.H. Green and S.H. Sie 29

Trace-element and isotopic characteristics of small-degree melts of the asthenosphere: Evidence from the alkalic basalts of the Antarctic Peninsula
M.J. Hole, P.D. Kempton and I.L. Millar 51

Rb-Sr dating of acidic rocks from the middle part of the Inner Zone of southwest Japan: tectonic implications for the migration of the Cretaceous to Paleogene igneous activity
Y. Terakado and S. Nohda 69

Collision of the North China and Yangtse Blocks and formation of coesite-bearing eclogites: Timing and processes
S. Li, Y. Xiao, D. Liou, Y. Chen, N. Ge, Z. Zhang, S. Sun, B. Cong, R. Zhang, S.R. Hart and S. Wang 89

Further experimental evidence for a crystallite size effect in the FeS₂-CoS₂ system
V.L. Tauson and V.V. Akimov 113

The behaviour of thallium in the (sub)surface environment in terms of Eh and pH
B.W. Vink 119

Major-element ratios in synthetic fluid inclusions by synchrotron X-ray fluorescence microprobe
D.A. Vanko, S.R. Sutton, M.L. Rivers and R.J. Bodnar 125

Geochemical modelling of late diagenetic processes in the Brent Sandstone, Alwyn South area (East Shetland Basin, North Sea) 1. Estimation of the circulated fluids composition
M. Ben Baccar, B. Fritz and O. Brévert 135

Geochemistry and origin of formation brines from the Paris Basin, France 1. Brines associated with Triassic salts
J.Ch. Fontes and J.M. Matray 149

Geochemistry and origin of formation brines from the Paris Basin, France 2. Saline solutions associated with oil fields
J.Ch. Fontes and J.M. Matray 177

Adsorption of organic compounds on carbonate minerals 1. Model compounds and their influence on mineral wettability
M.M. Thomas, J.A. Clouse and J.M. Longo 201

Adsorption of organic compounds on carbonate minerals 2. Extraction of carboxylic acids from recent and ancient carbonates
G.C. Frye and M.M. Thomas 215

Adsorption of organic compounds on carbonate minerals 3. Influence on dissolution rates
M.M. Thomas, J.A. Clouse and J.M. Longo 227

Monitoring tectonically controlled marine to lacustrine transitions using organic facies — Ridge Basin, California, U.S.A.
J.A. Curiale and S.A. Stout 239

Isotope Geoscience Section

Research Papers

Gulf of Mexico hydrocarbon seep communities XI. Carbon isotopic fractionation during fatty acid biosynthesis of

seep organisms and its implication for chemosynthetic processes	
J. Fang, T.A. Abrajano, P.A. Comet, J.M. Brooks, R. Sassen and L.R. MacDonald	271
Using stable isotopes as natural tracers to delineate hydrological drainage basins on the Greenland ice-sheet margin	
N. Reeh and H.H. Thomsen	281
Isotopic composition of lead in Proterozoic anoxic metasedimentary and volcanogenic rocks from the Bohemian Massif (Czech Republic) with metallogenetic implications	
J. Pašava and B. Amov	293
K-Ar dates and paleomagnetic evidence for Cretaceous alteration of Mesozoic basaltic lava flows, Mesa Range, northern Victoria Land, Antarctica	
G. Faure and T.M. Mensing	305
Sm-Nd and U-Pb dating of eclogites and granulites from the Oberpfalz, NE Bavaria, Germany	
A. von Quadt and D. Gebauer	317
Sm-Nd mineral isochron ages of Late Proterozoic dyke swarms in Australia: evidence for two distinctive events of mafic magmatism and crustal extension	
J. Zhao and M.T. McCulloch	341
<i>Book Reviews</i>	
<i>Solar System Evolution: A New Perspective</i> , by S.R. Taylor — M. Grady	355
<i>Magmatism and the Causes of Continental Break-up</i> , by B.C. Storey, T. Alabaster, R.J. Pankhurst (Editors) — J. Hergt	356
<i>Uranium-series Disequilibrium: Applications to Earth, Marine and Environmental Sciences</i> , by M. Ivanovich and R.S. Harmon (Editors) — A. Kaufman	359
<i>Chemistry of the Solid-Water Interface: Processes at the Mineral-Water and Particle-Water Interface in Natural Systems</i> , by W. Stumm — R. Chester	360
<i>Continental Lower Crust</i> , by D.M. Fountain, R. Arculus and R.W. Kay (Editors) — G. Rivalenti	361
<i>Contents Volume 109, 1993</i>	363

